

REMARKS

Claims 1-10 are pending in the Application. Claims 6-8 are rejected under 35 U.S.C. §102(b). Claims 1-5 and 9-10 are rejected under 35 U.S.C. §103(a). Claim 6 was objected to because of an informality. Claim 6 was amended to overcome the informality as indicated above. Applicant respectfully traverses these rejections for at least the reasons stated below and respectfully requests that the Examiner reconsider and withdraw these rejections.

Applicant notes that claim 6 was not amended to overcome prior art but to overcome the Examiner's informality objection that a "failure" is not a structural part of the device. The amendment to claim 6 was not narrowing in scope. In fact, the amendment to claim 6 was broadening in scope. Hence, no prosecution history estoppel arises from the amendment to claim 6. *Festo Corp v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 62 U.S.P.Q.2d 1705, 1711-1712 (2002); 56 U.S.P.Q.2d 1865, 1870 (Fed. Cir. 2000). Further, the amendment made to claim 6 was not made for a substantial reason related to patentability and therefore no prosecution history estoppel arises from such an amendment. *See Festo Corp.*, 62 U.S.P.Q.2d 1705 at 1707 (2002); *Warner-Jenkinson Co. v. Hilton Davis Chemical Co.*, 41 U.S.P.Q.2d 1865, 1873 (1997).

I. CLAIM OBJECTIONS:

The Examiner has objected to claim 6 because the limitation of "a failure" is not a structural part of the device. Paper No. 3, page 2. Applicant has amended claim 6 by deleting the limitation of "a failure, wherein said failure being a heat generating failure" thereby removing "a failure" as a structural part of the semiconductor device. Applicant respectfully requests the Examiner to withdraw the objection to claim 6.

II. REJECTIONS UNDER 35 U.S.C. §102(b):

The Examiner has rejected claims 6-8 under 35 U.S.C. §102(b) as being anticipated by Woodmansee (U.S. Patent No. 3,511,086). Applicant respectfully traverses these rejections for at least the reasons stated below and respectfully requests the Examiner to reconsider and withdraw these rejections.

For a claim to be anticipated under 35 U.S.C. §102, each and every claim limitation must be found within the cited prior art reference and arranged as required by the claim. M.P.E.P. §2131.

Applicant respectfully asserts that Woodmansee does not disclose "an unpassivated surface" as recited in claim 6. The Examiner has not cited to a passage in Woodmansee as disclosing the above-cited claim limitation. The Examiner is reminded that the Examiner bears the initial burden and must submit objective evidence and not rely on his own subjective opinion in support of a *prima facie* case of anticipation. *See In re Oetiker*, 24 U.S.P.Q.2d 1443, 1444 (Fed. Cir. 1992). The Examiner must present a single prior art reference that expressly or inherently discloses each and every element as set forth in the claim. *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 U.S.P.Q.2d 1051, 1053 (Fed. Cir. 1987); M.P.E.P. §2131. Upon review of Woodmansee, Applicants respectfully assert that Woodmansee does not disclose the above-cited claim limitation. Thus, Woodmansee does not disclose all of the limitations of claim 6, and thus Woodmansee does not anticipate claim 6. M.P.E.P. §2131.

Applicant further asserts that Woodmansee does not disclose "a coating on said unpassivated surface" as recited in claim 6. The Examiner cites element 11 of Woodmansee as disclosing the above-cited claim limitation. Paper No. 3, page 3. Applicant respectfully traverses and asserts that Woodmansee instead discloses that a substrate, substrate 10, is coated with a filled cholesteric material 11 (a cholesteric medium which has therein a finely divided, dark opaque substance capable of absorbing certain light rays and imparting a visible color to the cholesteric material as temperature changes). Column 4, lines 7-12. There is no language in Woodmansee that discloses that substrate 10 has an unpassivated surface. Thus, Woodmansee does not disclose all of the limitations of claim 6, and thus Woodmansee does not anticipate claim 6. M.P.E.P. §2131.

Applicant further asserts that Woodmansee does not disclose "wherein said coating is non-electrically conducting and capable of localizing heat generated by a

failure in a particular area of said coating" as recited in claim 6. The Examiner cites element 11 of Woodmansee as disclosing the above-cited claim limitation. Paper No. 3, page 3. Applicant respectfully traverses and asserts that Woodmansee instead discloses that a substrate, substrate 10, is coated with a filled cholesteric material 11 (a cholesteric medium which has therein a finely divided, dark opaque substance capable of absorbing certain light rays and imparting a visible color to the cholesteric material as temperature changes). Column 4, lines 7-12. There is no language in Woodmansee that discloses that the cholesteric material is non-electrically conducting. Neither is there any language in Woodmansee that discloses that the cholesteric material is capable of localizing heat generated by a failure in a particular area of the coating. Thus, Woodmansee does not disclose all of the limitations of claim 6, and thus Woodmansee does not anticipate claim 6. M.P.E.P. §2131.

Applicant further asserts that Woodmansee does not disclose "wherein said failure is detected by detecting a location of said heat generated by said failure in said coating" as recited in claim 6. The Examiner cites element 11 of Woodmansee as disclosing the above-cited claim limitation. Paper No. 3, page 3. Applicant respectfully traverses and asserts that Woodmansee instead discloses that a substrate, substrate 10, is coated with a filled cholesteric material 11 (a cholesteric medium which has therein a finely divided, dark opaque substance capable of absorbing certain light rays and imparting a visible color to the cholesteric material as temperature changes). Column 4, lines 7-12. There is no language in Woodmansee that discloses detecting a failure in the coating. Neither is there any language in Woodmansee that discloses detecting a failure by detecting a location of the heat generated by the failure in the coating. Thus, Woodmansee does not disclose all of the limitations of claim 6, and thus Woodmansee does not anticipate claim 6. M.P.E.P. §2131.

Claims 7-8 each recite combinations of features including the above combinations, and thus are not anticipated for at least the above-stated reasons. Claims 7-8 recite additional features, which, in combination with the features of the claims upon which they depend, are not anticipated by Woodmansee.

For example, Woodmansee does not disclose "wherein said coating comprises a high flash point and a low vapor pressure" as recited in claim 7. The Examiner cites element 11 of Woodmansee as disclosing the above-cited claim limitation. Paper No. 3, page 3. Applicant respectfully traverses and asserts that Woodmansee instead discloses that a substrate, substrate 10, is coated with a filled cholesteric material 11 (a cholesteric medium which has therein a finely divided, dark opaque substance capable of absorbing certain light rays and imparting a visible color to the cholesteric material as temperature changes). Column 4, lines 7-12. There is no language in Woodmansee that discloses that the cholesteric material has a high flash point. Neither is there any language in Woodmansee that discloses that the cholesteric material has a low vapor pressure. Thus, Woodmansee does not disclose all of the limitations of claim 7, and thus Woodmansee does not anticipate claim 7. M.P.E.P. §2131.

Applicant further asserts that Woodmansee does not disclose "wherein said coating comprises a layer of liquid" as recited in claim 8. The Examiner has not cited to a passage in Woodmansee as disclosing the above-cited claim limitation. The Examiner is reminded that the Examiner bears the initial burden and must submit objective evidence and not rely on his own subjective opinion in support of a *prima facie* case of anticipation. See *In re Oetiker*, 24 U.S.P.Q.2d 1443, 1444 (Fed. Cir. 1992). The Examiner must present a single prior art reference that expressly or inherently discloses each and every element as set forth in the claim. *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 U.S.P.Q.2d 1051, 1053 (Fed. Cir. 1987); M.P.E.P. §2131. Thus, Woodmansee does not disclose all of the limitations of claim 8, and thus Woodmansee does not anticipate claim 8. M.P.E.P. §2131.

As a result of the foregoing, Applicant respectfully asserts that not each and every claim limitation was found within Woodmansee, and thus claims 6-8 are not anticipated by Woodmansee.

### III. REJECTIONS UNDER 35 U.S.C. §103(a):

The Examiner has rejected claims 1-5 and 9-10 under 35 U.S.C. §103(a) as being unpatentable over Woodmansee in view of Debenham (U.S. Patent No. 6,138,256). Applicant respectfully traverses these rejections for at least the reasons stated below and respectfully requests the Examiner to reconsider and withdraw these rejections.

#### A. The Examiner has not provided any objective evidence for combining Woodmansee with Debenham.

A *prima facie* showing of obviousness requires the Examiner to establish, *inter alia*, that the prior art references teach or suggest, either alone or in combination, all of the limitations of the claimed invention, and the Examiner must provide a motivation or suggestion to combine or modify the prior art reference to make the claimed inventions. M.P.E.P. §2142. The showings must be clear and particular and supported by objective evidence. *In re Lee*, 277 F.3d 1338, 1343, 61 U.S.P.Q.2d 1430, 1433-34 (Fed. Cir. 2002); *In re Kotzab*, 217 F.3d 1365, 1370, 55 U.S.P.Q.2d 1313, 1317 (Fed. Cir. 2000); *In re Dembiczak*, 50 U.S.P.Q.2d 1614, 1617 (Fed. Cir. 1999). Broad conclusory statements regarding the teaching of multiple references, standing alone, are not evidence. *Id.*

The Examiner's motivation for modifying Woodmansee with Debenham (1) to apply a coating to an unpassivated surface of a semiconductor device; (2) to have a coating that is non-electrically conducting and capable of localizing heat generated by the failure in a particular area; (3) to bias the semiconductor device; and (4) to detect the failure by detecting a location of the heat generated by the failure in the coating, as recited in claim 1, is "in order to determine failures in a semiconductor device." Paper No. 3, page 4. The Examiner's motivation is insufficient to support a *prima facie* case of obviousness for at least the reasons stated below.

The Examiner's motivation is not a motivation as to why one of ordinary skill in the art with the primary reference (Woodmansee) in front of him would have been motivated to modify the primary reference (Woodmansee) with the teachings of the secondary reference (Debenham). The motivation to modify Woodmansee (1) to

apply a coating to an unpassivated surface of a semiconductor device; (2) to have a coating that is non-electrically conducting and capable of localizing heat generated by the failure in a particular area; (3) to bias the semiconductor device; and (4) to detect the failure by detecting a location of the heat generated by the failure in the coating in order to determine failures in a semiconductor device appears to have been gleaned from Applicant's disclosure. There is no suggestion in either Woodmansee or Debenham to apply a coating to an unpassivated surface of a semiconductor device in order to determine a failure in a semiconductor device. Neither is there any suggestion in either Woodmansee or Debenham to have a coating that is non-electrically conducting and capable of localizing heat generated by the failure in a particular area in order to determine a failure in a semiconductor device. Neither is there any suggestion in either Woodmansee or Debenham to bias the semiconductor device in order to determine a failure in a semiconductor device. Neither is there any suggestion in either Woodmansee or Debenham to detect a failure by detecting a location of the heat generated by the failure in the coating in order to determine a failure in a semiconductor device. Any judgment on obviousness must not include knowledge gleaned from Applicant's disclosure. *In re McLaughlin*, 170 U.S.P.Q. 209, 212 (C.C.P.A. 1971). Consequently, the Examiner's motivation is insufficient to support a *prima facie* case of obviousness for rejecting claims 1-5 and 9-10 since it is merely the Examiner's subjective opinion. *In re Lee*, 61 U.S.P.Q.2d 1430, 1434 (Fed. Cir. 2002).

Further, the Examiner must submit objective evidence and not rely on his own subjective opinion in support of combining Woodmansee, which teaches defining discontinuities in a substrate by applying a layer of cholesteric liquid crystal material in thermally responsive relationship to the substrate and then thermally cycling the substrate to temperature range sufficient to cause select light scattering by the cholesteric liquid crystal material producing color patterns indicative of the discontinuities in the substrate (Abstract of Woodmansee), with Debenham, which teaches determining whether it is more efficient to retest or repair the semiconductor device when failures are detected (column 1, lines 10-12 of Debenham). *Id.* There is no suggestion in Woodmansee of retesting a semiconductor device. Neither is there

any suggestion in Woodmansee of repairing a semiconductor device. Neither is there any suggestion in Woodmansee of detecting failures in a semiconductor device. Neither is there any suggestion in Woodmansee of determining whether it is more efficient to retest or repair the semiconductor device when failures are detected in the semiconductor device. Since the Examiner has not submitted objective evidence for modifying Woodmansee with Debenham, the Examiner has not presented a *prima facie* case of obviousness for rejecting claims 1-5 and 9-10. *Id.*

Further, the Examiner must submit objective evidence and not rely on his own subjective opinion in support of modifying Woodmansee to apply a coating to an unpassivated surface of a semiconductor device (Examiner admits that Woodmansee does not teach this limitation). *Id.* There is no suggestion in Woodmansee of applying a coating to an unpassivated surface. Neither is there any suggestion in Woodmansee of applying a coating to an unpassivated surface of a semiconductor device. Since the Examiner has not submitted objective evidence for modifying Woodmansee to apply a coating to an unpassivated surface of a semiconductor device, the Examiner has not presented a *prima facie* case of obviousness for rejecting claims 1-5 and 9-10. *Id.*

Further, the Examiner must submit objective evidence and not rely on his own subjective opinion in support of modifying Woodmansee to have a coating that is non-electrically conducting and capable of localizing heat generated by the failure in a particular area (Examiner admits that Woodmansee does not teach this limitation). *Id.* There is no suggestion in Woodmansee of having a coating that is non-electrically conducting. Neither is there any suggestion in Woodmansee of having a coating that is capable of localizing heat generated by a failure in a particular area. Since the Examiner has not submitted objective evidence for modifying Woodmansee to have a coating that is non-electrically conducting and capable of localizing heat generated by the failure in a particular area, the Examiner has not presented a *prima facie* case of obviousness for rejecting claims 1-5 and 9-10. *Id.*

Further, the Examiner must submit objective evidence and not rely on his own subjective opinion in support of modifying Woodmansee to bias the semiconductor device (Examiner admits that Woodmansee does not teach this limitation). *Id.* There is no suggestion in Woodmansee of having a semiconductor device. Neither is there any suggestion in Woodmansee of biasing a semiconductor device. Since the Examiner has not submitted objective evidence for modifying Woodmansee to bias the semiconductor device, the Examiner has not presented a *prima facie* case of obviousness for rejecting claims 1-5 and 9-10. *Id.*

Further, the Examiner must submit objective evidence and not rely on his own subjective opinion in support of modifying Woodmansee to detect the failure by detecting a location of the heat generated by the failure in the coating (Examiner admits that Woodmansee does not teach this limitation). *Id.* There is no suggestion in Woodmansee of detecting a failure. Neither is there any suggestion in Woodmansee of detecting a failure by detecting a location of the heat generated by the failure in the coating. Since the Examiner has not submitted objective evidence for modifying Woodmansee to detect the failure by detecting a location of the heat generated by the failure in the coating, the Examiner has not presented a *prima facie* case of obviousness for rejecting claims 1-5 and 9-10. *Id.*

As a result of the foregoing, Applicant respectfully asserts that the Examiner has not presented a *prima facie* case of obviousness for rejecting claims 1-5 and 9-10. M.P.E.P. §2143.

B. The Examiner has not presented a reasonable expectation of success when combining Woodmansee with Debenham.

The Examiner must present a reasonable expectation of success in combining Woodmansee with Debenham in order to establish a *prima facie* case of obviousness. M.P.E.P. §2143.02. As stated above, Woodmansee teaches defining discontinuities in a substrate by applying a layer of cholesteric liquid crystal material in thermally responsive relationship to the substrate and then thermally cycling the substrate to a temperature range sufficient to cause select light scattering by the cholesteric liquid

crystal material producing color patterns indicative of the discontinuities in the substrate. Debenham, on the other hand, teaches determining whether it is more efficient to retest or repair the semiconductor device when failures are detected. The Examiner has not presented any evidence that there would be a reasonable expectation of success in combining Woodmansee, which teaches defining discontinuities in a substrate by applying a layer of cholesteric liquid crystal material in thermally responsive relationship to the substrate, with Debenham, which teaches determining whether it is more efficient to retest or repair the semiconductor device when failures are detected. The Examiner has not provided any evidence as to how a method for defining discontinuities in a substrate by applying a layer of cholesteric liquid crystal material would be combined with a method for determining whether it is more efficient to retest or repair a semiconductor device when failures are detected. Consequently, the Examiner has not provided a *prima facie* case of obviousness for rejecting claims 1-5 and 9-10. M.P.E.P. §2143.02.

C. By combining Woodmansee with Debenham, the principle of operation in Woodmansee would change.

If the proposed modification or combination of the prior art would change the principle of the operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious. *In re Ratti*, 270 F.2d 810, 123 U.S.P.Q. 349 (C.C.P.A. 1959). Further, if the proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification. *In re Gordon*, 733 F.2d 900, 221 U.S.P.Q. 1125 (Fed. Cir. 1984). For the reasons discussed below, Applicant submits that by combining Woodmansee with Debenham, the principle of operation in Woodmansee would change and subsequently render the operation of Woodmansee to perform its purpose unsatisfactorily.

As stated above, Woodmansee teaches defining discontinuities in a substrate by applying a layer of cholesteric liquid crystal material in thermally responsive relationship to the substrate and then thermally cycling the substrate to a temperature

range sufficient to cause select light scattering by the cholesteric liquid crystal material producing color patterns indicative of the discontinuities in the substrate. Abstract. Woodmansee further teaches that the invention relates to the observation and recording of temperature distribution patterns on a substrate by liquid cholesteric materials as they are subjected to a variable temperature environment while in contact with a substrate. Column 1, lines 29-33.

Debenham, on the other hand, teaches determining whether it is more efficient to retest or repair the semiconductor device when failures are detected. Column 1, lines 10-12. Debenham further teaches a testing system with various bins, e.g., a pass bin, a reject bin, a repair bin, a good bin. Column 6, lines 28-59. Debenham further teaches a tester in the testing system that performs tests on semiconductor devices. Column 6, lines 66-67.

By combining Woodmansee with Debenham, Woodmansee would not be able to observe and record temperature distribution patterns on a substrate using cholesteric liquid crystal material. Instead, Woodmansee would have to be modified to be a testing system with various bins, e.g., reject bin, repair bin, configured to determine whether it is more efficient to retest or repair a semiconductor device when a failure is detected in the semiconductor device. Hence, Woodmansee would no longer be able to apply a layer of cholesteric liquid crystal material in thermally responsive relationship to the substrate and then thermally cycling the substrate to a temperature range sufficient to cause select light scattering by the cholesteric liquid crystal material producing color patterns indicative of the discontinuities in the substrate. Consequently, by combining Woodmansee with Debenham, the principle of operation in Woodmansee would change and subsequently render the operation of Woodmansee to perform its purpose unsatisfactorily. Therefore, the Examiner has not presented a *prima facie* case of obviousness for rejecting claims 1-5 and 9-10. *In re Ratti*, 270 F.2d 810, 123 U.S.P.Q. 349 (C.C.P.A. 1959); *In re Gordon*, 733 F.2d 900, 221 U.S.P.Q. 1125 (Fed. Cir. 1984).

- D. Woodmansee and Debenham, taken singly or in combination, do not teach or suggest the following claim limitations.

Applicant respectfully asserts that Woodmansee and Debenham, taken singly or in combination, do not teach or suggest "applying a coating to said unpassivated surface of said semiconductor device" as recited in claim 1. The Examiner cites element 11 of Woodmansee as teaching applying a coating to an unpassivated surface. Paper No. 3, page 3. The Examiner cites Debenham as teaching a semiconductor device. Paper No. 3, page 4. Applicant respectfully traverses and asserts that Woodmansee instead teaches that a substrate, substrate 10, is coated with a filled cholesteric material 11 (a cholesteric medium which has therein a finely divided, dark opaque substance capable of absorbing certain light rays and imparting a visible color to the cholesteric material as temperature changes). Column 4, lines 7-12. There is no language in Woodmansee that teaches that substrate 10 has an unpassivated surface. Therefore, the Examiner has not presented a *prima facie* case of obviousness since the Examiner is relying upon an incorrect, factual predicate in support of the rejection. *In re Rouffet*, 47 U.S.P.Q.2d 1453, 1455 (Fed. Cir. 1998).

Applicant further asserts that Woodmansee and Debenham, taken singly or in combination, do not teach or suggest "wherein said coating is non-electrically conducting and capable of localizing heat generated by a failure in a particular area" as recited in claim 1. The Examiner cites element 11 of Woodmansee as teaching the above-cited claim limitation. Paper No. 3, page 3. Applicant respectfully traverses and asserts that Woodmansee instead teaches that a substrate, substrate 10, is coated with a filled cholesteric material 11 (a cholesteric medium which has therein a finely divided, dark opaque substance capable of absorbing certain light rays and imparting a visible color to the cholesteric material as temperature changes). Column 4, lines 7-12. There is no language in Woodmansee that teaches that the cholesteric material is non-electrically conducting. Neither is there any language in Woodmansee that teaches that the cholesteric material is capable of localizing heat generated by a failure in a particular area of the coating. Therefore, the Examiner has not presented a *prima facie* case of obviousness since the Examiner is relying upon an incorrect,

factual predicate in support of the rejection. *In re Rouffet*, 47 U.S.P.Q.2d 1453, 1455 (Fed. Cir. 1998).

Applicant further asserts that Woodmansee and Debenham, taken singly or in combination, do not teach or suggest "biasing said semiconductor device" as recited in claim 1. The Examiner states that Woodmansee teaches biasing device 10. Paper No. 3, page 3. The Examiner further cites Debenham as teaching a semiconductor device. Paper No. 3, page 4. Applicant respectfully traverses and asserts that Woodmansee instead teaches that a substrate, substrate 10, is coated with a filled cholesteric material 11 (a cholesteric medium which has therein a finely divided, dark opaque substance capable of absorbing certain light rays and imparting a visible color to the cholesteric material as temperature changes). Column 4, lines 7-12. There is no language in Woodmansee of biasing substrate 10. Therefore, the Examiner has not presented a *prima facie* case of obviousness since the Examiner is relying upon an incorrect, factual predicate in support of the rejection. *In re Rouffet*, 47 U.S.P.Q.2d 1453, 1455 (Fed. Cir. 1998).

Applicant further asserts that Woodmansee and Debenham, taken singly or in combination, do not teach or suggest "detecting said failure by detecting a location of said heat generated by said failure in said coating" as recited in claim 1. The Examiner cites element 11 of Woodmansee as teaching the above-cited claim limitation. Paper No. 3, page 3. Applicant respectfully traverses and asserts that Woodmansee instead teaches that a substrate, substrate 10, is coated with a filled cholesteric material 11 (a cholesteric medium which has therein a finely divided, dark opaque substance capable of absorbing certain light rays and imparting a visible color to the cholesteric material as temperature changes). Column 4, lines 7-12. There is no language in Woodmansee that teaches detecting a failure in the coating. Neither is there any language in Woodmansee that teaches detecting a failure by detecting a location of the heat generated by the failure in the coating. Therefore, the Examiner has not presented a *prima facie* case of obviousness since the Examiner is relying upon an incorrect, factual predicate in support of the rejection. *In re Rouffet*, 47 U.S.P.Q.2d 1453, 1455 (Fed. Cir. 1998).

Claims 9-10 recite combinations of features including the combinations of claim 6, and thus are patentable over Woodmansee in view of Debenham for at least the reasons stated in Section A. Claims 9-10 recite additional features, which, in combination with the features of the claims upon which they depend, are patentable over Woodmansee in view of Debenham.

Claims 2-5 recite combinations of features including the combinations of claim 1, and thus are patentable for at least the above-stated reasons. Claims 2-5 recite additional features, which, in combination with the features of the claims upon which they depend, are patentable over Woodmansee in view of Debenham.

For example, Woodmansee and Debenham, taken singly or in combination, do not teach or suggest "wherein said coating comprises a high flash point and a low vapor pressure" as recited in claim 2. The Examiner cites element 11 of Woodmansee as teaching the above-cited claim limitation. Paper No. 3, page 3. Applicant respectfully traverses and asserts that Woodmansee instead teaches that a substrate, substrate 10, is coated with a filled cholesteric material 11 (a cholesteric medium which has therein a finely divided, dark opaque substance capable of absorbing certain light rays and imparting a visible color to the cholesteric material as temperature changes). Column 4, lines 7-12. There is no language in Woodmansee that teaches that the cholesteric material has a high flash point. Neither is there any language in Woodmansee that teaches that the cholesteric material has a low vapor pressure. Therefore, the Examiner has not presented a *prima facie* case of obviousness since the Examiner is relying upon an incorrect, factual predicate in support of the rejection. *In re Rouffet*, 47 U.S.P.Q.2d 1453, 1455 (Fed. Cir. 1998).

Applicant further asserts that Woodmansee and Debenham, taken singly or in combination, do not teach or suggest "wherein said coating comprises a layer of liquid" as recited in claim 3. The Examiner has not cited to a passage in Woodmansee as disclosing the above-cited claim limitation. The Examiner is reminded that the Examiner bears the initial burden and must submit objective evidence and not rely on his own subjective opinion in support of a *prima facie* case of obviousness. *In re*

*Oetiker*, 24 U.S.P.Q.2d 1443, 1444 (Fed. Cir. 1992). Therefore, the Examiner has not presented a *prima facie* case of obviousness since the Examiner is relying upon an incorrect, factual predicate in support of the rejection. *In re Rouffet*, 47 U.S.P.Q.2d 1453, 1455 (Fed. Cir. 1998).

Applicant further asserts that Woodmansee and Debenham, taken singly or in combination, do not teach or suggest "wherein said coating comprises silicon dioxide" as recited in claim 4 and similarly in claim 9. The Examiner states:

The particular type of material used to make the coating claimed by applicant, i.e., silicon dioxide, is only considered to be the use of a 'preferred' or 'optimum' material out of a plurality of well known materials that a person having ordinary skill in the art at the time the invention was made would have find obvious to provide using routine experimentation based, among other things, on the intended use of Applicant's apparatus, i.e., suitability for the intended use of Applicant's apparatus. See *In re Leshin*, 125 U.S.P.Q. 416 (C.C.P.A. 1960) where the court stated that a selection of a material on the basis of suitability for intended use of an apparatus would be entirely obvious. Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to make the coating disclosed by Woodmansee of silicon dioxide since silicon dioxide is a well known material used in the semiconductor technology. Paper No. 3, page 5.

*In re Leshin*, the case cited by the Examiner in support of his rejection of the above-cited claim limitation, stands for the proposition that the selection of a known material based on its suitability for its intended use supports a *prima facie* case of obviousness. M.P.E.P. §2144.07. However, there is no suggestion in either Woodmansee or Debenham of a coating that has the capability of being non-electrically conducting and has the capability of localizing heat generated by a failure in a particular area of the coating. Neither is there any suggestion in either Woodmansee or Debenham that silicon dioxide is known as a coating that has the capability of being non-electrically conducting and has the capability of localizing heat generated by a failure in a particular area of the coating. If the Examiner is asserting that a person of ordinary skill in the art would have known that silicon dioxide is known as a coating that has the capability of being non-electrically conducting and has the capability of localizing heat generated by a failure in a

particular area of the coating, then the Examiner must submit objective evidence to support such a proposition instead of relying on his own subjective opinion. *In re Lee*, 61 U.S.P.Q.2d 1430, 1433-34 (Fed. Cir. 2002). Therefore, the Examiner has not presented a *prima facie* case of obviousness since the Examiner is relying upon an incorrect, factual predicate in support of the rejection. *In re Rouffet*, 47 U.S.P.Q.2d 1453, 1455 (Fed. Cir. 1998).

Furthermore, if the Examiner is asserting that a person of ordinary skill in the art would have known through routine experimentation that silicon dioxide is a coating that has the capability of being non-electrically conducting and has the capability of localizing heat generated by a failure in a particular area of the coating, then the Examiner must submit objective evidence to support such a proposition instead of relying on his own subjective opinion. *In re Lee*, 61 U.S.P.Q.2d 1430, 1433-34 (Fed. Cir. 2002). Furthermore, the general conditions of a claim must be disclosed in the prior art, in order for the Examiner to conclude that that it is not inventive to discover the optimum material by routine experimentation. *In re Aller*, 220 F.2d 454, 456, 105 U.S.P.Q. 233, 235 (C.C.P.A. 1955); M.P.E.P. §2144.05. Since the general conditions of the above-cited claim limitation were not disclosed in either Woodmansee or Debenham, the Examiner cannot conclude that a person of ordinary skill in the art would have discovered through routine experimentation that silicon dioxide is a coating that has the capability of being non-electrically conducting and has the capability of localizing heat generated by a failure in a particular area of the coating. Therefore, the Examiner has not presented a *prima facie* case of obviousness since the Examiner is relying upon an incorrect, factual predicate in support of the rejection. *In re Rouffet*, 47 U.S.P.Q.2d 1453, 1455 (Fed. Cir. 1998).

Applicant further asserts that Woodmansee and Debenham, taken singly or in combination, do not teach or suggest "wherein said coating has a thickness of approximately two microns" as recited in claim 5 and similarly in claim 10. The Examiner states:

The specific thickness claimed by applicant, i.e., 2 microns, is only considered to be the 'optimum' value of the thickness of the coating, as

stated above, that a person having ordinary skill in the art would have been able to determine using routine experimentation based, among other things, on the desired accuracy and since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. See *In re Boesch*, 205 U.S.P.Q. 215 (C.C.P.A. 1980). Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to provide a thickness of 2 microns in order to make the coating thin enough to detect heat spots indicating a failure. Paper No. 3, pages 5-6.

*In re Boesch*, the case cited by the Examiner in support of his rejection of the above-cited claim limitation, is a case cited in M.P.E.P. §2144.05 which is a section based on obviousness of ranges. There is no range cited in the above-cited claim limitation. Neither does Woodmansee teach a range in the thickness' of cholesteric material 11. Furthermore, *In re Boesch* stands for the proposition that a variable which achieves a recognized result must be first recognized before the determination of the optimum or workable ranges of the variable might be characterized as routine experimentation. M.P.E.P. §2144.05. The Examiner has not presented any evidence that a thickness of approximately two microns for a coating to an unpassivated surface of a semiconductor device achieves a recognized result. Further, as stated above, there is no range of thickness' stated in claim 5 and similarly in claim 10 for the coating applied to an unpassivated surface of a semiconductor device. Hence, the Examiner's reliance upon *In re Boesch* in rejecting claims 5 and 10 is misplaced.

Further, there is no suggestion in either Woodmansee or Debenham of having a coating that has the capability of being non-electrically conducting and has the capability of localizing heat generated by a failure in a particular area of the coating. Neither is there any suggestion in either Woodmansee or Debenham that such a coating have a thickness of approximately two microns. If the Examiner is asserting that a person of ordinary skill in the art would have known through routine experimentation a thickness of approximately two microns for a coating that has the capability of being non-electrically conducting and that has the capability of localizing heat generated by a failure in a particular area of the coating, then the Examiner must submit objective evidence to support such a proposition instead of relying on his own subjective opinion. *In re Lee*, 61 U.S.P.Q.2d 1430, 1433-34 (Fed.

Cir. 2002). Furthermore, the general conditions of a claim must be disclosed in the prior art (there is no range of thickness' for cholesteric material 11 in Woodmansee), in order for the Examiner to conclude that that it is not inventive to discover the optimum value by routine experimentation. *In re Aller*, 220 F.2d 454, 456, 105 U.S.P.Q. 233, 235 (C.C.P.A. 1955); M.P.E.P. §2144.05. Since the general conditions of the above-cited claim limitation were not disclosed in either Woodmansee or Debenham, the Examiner cannot conclude that a person of ordinary skill in the art would have discovered through routine experimentation a thickness of approximately two microns for a coating that has the capability of being non-electrically conducting and that has the capability of localizing heat generated by a failure in a particular area of the coating. Therefore, the Examiner has not presented a *prima facie* case of obviousness since the Examiner is relying upon an incorrect, factual predicate in support of the rejection. *In re Rouffet*, 47 U.S.P.Q.2d 1453, 1455 (Fed. Cir. 1998).

As a result of the foregoing, Applicant respectfully asserts that there are numerous claim limitations not taught or suggested in the cited prior art, and thus the Examiner has not presented a *prima facie* case of obviousness for rejecting claims 1-5 and 9-10 as being unpatentable over Woodmansee in view of Debenham. M.P.E.P. §2143.

IV. CONCLUSION

As a result of the foregoing, it is asserted by Applicant that claims 1-10 in the Application are in condition for allowance, and Applicant respectfully requests an allowance of such claims. Applicant respectfully requests that the Examiner call Applicant's attorney at the below listed number if the Examiner believes that such a discussion would be helpful in resolving any remaining issues.

Respectfully submitted,

WINSTEAD SECHREST & MINICK P.C.

Attorneys for Applicant

By: 

Kelly K. Kordzik  
Reg. No. 36,571  
Robert A. Voigt, Jr.  
Reg. No. 47,159

P.O. Box 50784  
Dallas, Texas 75201  
(512) 370-2832

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